

**Amendments To The Claims****1-7.(cancelled)**

**8.(currently amended)** A process for manufacturing a BiMOS microcircuit, comprising:

- forming a buried layer of a first semiconductor material;
- forming a gate oxide for at least one MOS transistor;
- forming a poly-Si layer on the gate oxide;
- forming a base of a second semiconductor material;
- forming a source and a drain for the MOS transistor of a third semiconductor material; and
- forming an emitter of a group III/VI semiconductor on the base, the group III/VI semiconductor selected from the group consisting of GaS, GaSe, GaTe, InS, InSe, InTe, and TIS.

**9.(original)** The process of claim 8, further comprising:

after forming the buried layer, isolating the buried layer into pockets.

**10.(original)** The process of claim 8, further comprising forming a deep N+ collector.

**11.(original)** The process of claim 8, further comprising:  
utilizing part of the buried layer as a collector; and  
forming contacts to the base, emitter, collector, source, drain, and poly-Si layer on the gate oxide.

**12.(original)** The process of claim 8, further comprising forming wells of the second semiconductor material in the buried layer.

**13.(original)** A BiMOS microcircuit produced according to the process of claim 8.

**14-15.(cancelled)**

16.(currently amended) A process for manufacturing a heterojunction bipolar transistor (HBT), comprising:

forming a collector of a first semiconductor;  
forming a base of a second semiconductor; and  
forming an emitter of a group III/VI semiconductor selected from the group consisting of GaS, GaSe, GaTe, InS, InSe, InTe, and TlS.

17.(original) A heterojunction bipolar transistor (HBT) manufactured according to the process of claim 16.

18-21.(cancelled)

22.(new) A process for manufacturing a transistor, comprising:

forming a base;  
forming a collector;  
forming an emitter of a group III/VI semiconductor; and  
forming an emitter contact coupled to the emitter.

23.(new) The process of Claim 22, wherein forming a base comprises forming a base of a p-type semiconductor material and forming a collector comprises forming a collector of an n-type semiconductor material.

24.(new) The process of Claim 22, wherein forming a base comprises forming a base of an n-type semiconductor and forming a collector comprises forming a collector of a p-type semiconductor and further comprising doping the group III/VI semiconductor to behave as a p-type semiconductor.